Antec
The Power of You

Quiet computing

New Solution Series

NSK6580

User's Manual

Manuel de l'utilisateur
Anwenderhandbuch
Manuale per l'operatore
Manual del usuario
取扱説明書

At Antec, we continually refine and improve our products to ensure the highest quality. It's possible that your new case will differ slightly from the descriptions in this manual. This isn't a problem; it's simply an improvement. As of the date of publication, all features, descriptions, and illustrations in this manual are correct.

Disclaimer

This manual is intended only as a guide for Antec's Computer Enclosures. For more comprehensive instructions on installing the motherboard and peripherals, please refer to the user's manuals that come with those components.

New Solution Series User's Manual

NSK 6580
Quiet Super Mid Tower Case

This case is designed to meet Intel's Thermally Advantaged Chassis (TAC) design guide requirements.

The Power Supply

NSK 6580 comes with an EarthWatts 430 watt PSU. Universal input, active PFC single 80mm fan cooled power supply that follows the ATX12V version 2.2 specifications. This includes dual +12V output rails that deliver safer and more reliable output to your system's components. Featuring higher energy efficiency, which reduces power consumption by up to 25%, saving you money on your electricity bill. EarthWatts power supplies have achieved 80 PLUS® Certification, the latest independent standard in power supply efficiency. In addition EarthWatts includes a variety of protective circuitry: OPP (over power protection), OVP (over voltage protection), and SCP (short circuit protection).

The PSU comes with a main power switch. Make sure you turn the switch to the ON (I) position before you boot up the computer for the first time. Normally, you won't need to switch to the OFF (O) position, since the PSU includes a soft on/off feature. This lets you turn the computer on and off by using the soft switch on the computer case. If the computer crashes and you can't shut it down using the soft switch, you can switch the main power to the OFF (O) position to shut the system down. Then turn the switch back to the ON (I) position and reboot.

Antec power supply models feature Power Factor Correction (PFC) circuitry in accordance with European standard regulation code EN61000-3-2. By altering the input current wave shape, PFC improves the power factor of the PSU. A better Power Factor increases energy efficiency, reduces heat, improves output voltage stability and prolongs the life of all equipment. The PSU's high efficiency design and quiet fan deliver not only a cleaner but also a quieter operating environment.

Setting Up

Although care has been taken to prevent sharp edges in your Antec case, we strongly recommend taking your time and the appropriate care when working with it. Hurried or careless motion and use of excessive force, particularly when you are working in areas you cannot see clearly, are but a few examples of activity that should be avoided. Please use reasonable precaution.

1. Place the case upright on a flat, stable surface. The power supply fan should be at the back, facing you.
2. Remove the screws from the right side panel.
3. There are two latches on the side panel. Slide the latches towards the front of the case and swing open the panel.
4. Inside the case you should see the power supply, some wiring with marked connectors (USB, PWR etc.), and installed I/O panel and a power cord.

Installing the Motherboard

This manual does not cover CPU, RAM, or expansion card installation. Please consult the motherboard manual for specific mounting instructions and troubleshooting.

1. Lay the case down, with the open side facing up. The drive cages and power supply should be visible.
2. Make sure you have the appropriate I/O panel for the motherboard. If the panel provided is not suitable for the motherboard, please contact the motherboard manufacturer for the correct I/O panel.
3. Line up the motherboard with the standoff holes, and remember which holes are lined up. Not all motherboards will match with all the provided holes; this is normal, and won't affect functionally.
4. Remove the motherboard by lifting it up.
5. Screw the brass standoffs into the threaded holes that line up with the motherboard. Do not overtighten the standoffs. Some standoffs may be pre-installed for your convenience.
6. Place the motherboard on the brass standoffs.
7. Screw in the motherboard to the standoffs with the provided Philips-head screws.
8. The motherboard is now installed.

Connecting the Power and LED

The power supply conforms to the ATX12V Version 2.2 standard. If the motherboard has a 20-pin power receptacle, detach the 4-pin attachment on the 24-pin power connector, see pictures 1 and 2. Before you connect the power supply to any devices, please consult the appropriate user manuals for the motherboard and other peripherals.

Picture 1

For 24-pin motherboards

Picture 2

For 20-pin motherboards

1. Connect the 24-pin Main Power Connector and the 4-pin or 8-pin 12V connector to the motherboard as needed. If the motherboard uses a 20-pin connector; detach the 4-pin attachment on the 24-pin power connector (see pictures 1 and 2). **Note**: the detachable 4-pin section cannot be used in place of a 4-pin +12V connector.
2. Connect the Reset switch (labeled RESET SW) to the motherboard at the RST connector. Polarity (positive and negative) does not matter for switches.
3. Power Switch (labeled POWER SW) connects to the PWR connector on the motherboard.
4. Power LED (labeled POWER LED) connector is located behind the Reset connector. For LEDs, colored wires are positive (+). White or black wires are negative (-). If the LED does not light up when the system is powered on, try reversing the connection. For more info on connecting LEDs to your

motherboard, see your motherboard manual.

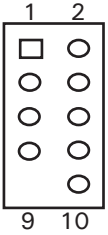
5. Hard Drive LED (labeled H.D.D. LED) connects to the IDE connector.

Connecting the USB Ports

You will find a single 10-pin connector on a cable attached to the front USB ports. This is an Intel standard connector, which is keyed so that it can't be accidentally, reversed as long as it is connected to a proper Intel standard motherboard header. Connect the 10-pin connector to the motherboard headers so that the blocked pin fits over the missing header pin.

Note: Please check the motherboard manual for the USB header pin layout and make sure it matches the table below. If it does not match this Intel® standard, please visit Antec's web store at http://www.antec.com/StoreFront.bok and search for part number 30095 to order a USB Internal Adapter Cable. This adapter will allow you to connect the front USB to your motherboard on a pin-by-pin basis.

Motherboard Pin Layout



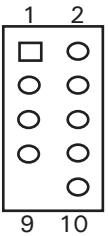
Pin	Signal Names	Pin	Signal Names
1	USB Power 1	2	USB Power 2
3	Negative Signal 1	4	Negative Signal 2
5	Positive Signal 1	6	Positive Signal 2
7	Ground 1	8	Ground 2
9	Key (No Connection)	10	Empty Pin

Connecting the IEEE 1394 (FireWire®, i.Link®) Port

You will find a single 10-pin connector on a cable attached to the front IEEE 1394 connection. This is an Intel standard connector, which is keyed so that it can't be accidentally reversed as long as it is connected to a proper Intel standard motherboard header. Connect the 10-pin connector to the motherboard header so that the blocked pin fits over the missing header pin.

Note: Please check the motherboard manual for your IEEE 1394 header pin layout and make sure it matches the table below. If you intend to connect the front FireWire port to an IEEE 1394 add-on card that comes with an external-type IEEE 1394 connector, you will need a FireWire Internal Adapter. To order one, please visit Antec's web store at http://www.antec.com/StoreFront.bok and search for part number 30031. This adapter will allow you to connect the front IEEE 1394 port to the external-type connector.

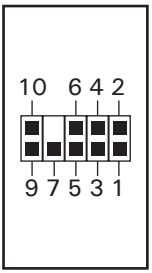
Pin Assignment for Front Panel IEEE 1394 Connector



Pin	Signal Names	Pin	Signal Names
1	TPA+	2	TPA–
3	Ground	4	Ground
5	TPB+	6	TPB–
7	+12V (Fused)	8	+12V (Fused)
9	Key (No Pin)	10	Ground

CONNECTING THE AUDIO PORTS (AC' 97 and HDA)
There is an Intel standard 10-pin AC' 97 connector and an Intel 10-pin HDA (High Definition Audio) connector. You can connect either of them to your motherboard depending on the specification of the motherboard. See instruction below:
NOTE: Please check your motherboard manual for your audio header pin layout and make sure it matches the table below. Even if your system supports both audio standards, you may only connect one connector not both.

Pin Assignment for Audio Ports (HDA and AC'97)



Pin	Pin Assignment (HD AUDIO)	Pin	Pin Assignment (AC'97 AUDIO)
1	MIC2 L	1	MIC In
2	AGND	2	GND
3	MIC2 R	3	MIC Power
4	AVCC	4	NC
5	FRO-R	5	Line Out (R)
6	MIC2_JD	6	Line Out (R)
7	F_IO_SEN	7	NC
8	Key (no pin)	8	Key (no pin)
9	FRO-L	9	Line Out (L)
10	LINE2_JD	10	Line Out (L)

Locate the internal audio connectors from your motherboard or sound card. Consult your motherboard or sound card manual for the pin-out positions.

3.5" Device Installation

There is a 5.25" to 3.5" drive bay adapter installed inside the lowest 5.25" drive bay. Use this for the floppy drive or other external 3.5" device.

1. Remove the lowest 5.25" drive bay cover that has a 3.5" drive bay cover in it from the bezel.
2. Remove the 3.5" cover from it.
3. Loosen the two screws that fasten the adapter to the drive bay and slide the adapter out through the front of the case.
4. Mount the floppy drive or other external device into the adapter.
5. Slide and fasten the adapter back into the case.
6. Find a small 4-pin power connector on the power supply and connect it to the male 4-pin power connector on the device.
7. Reinstall the drive bay cover back to the bezel.

There is a HDD cage under the external 5.25" drive bays for hard drives. Inside the cage there are five HDD bays. Each comes with an individual drive tray with soft silicone grommets to absorb and isolate the HDD noise.

1. Loose the two thumb screws from the HDD cage.
2. Slide the HDD cage out from the case.
3. Squeeze the metal clips on each side of the tray and slide the tray out.
4. Mount the hard drive into the drive tray through the bottom silicone

grommets with the special screws provided. **Note**: Don't over-tighten the screws. Doing so will reduce the vibration and noise-dampening ability of the rubber grommets.

5. Slide and lock the tray back into the case.
6. Repeat the same procedure for the other devices as necessary. **Note**: If you choose to install the optional front 92 mm fans to the case, please do it now. See the instructions under "Cooling System" for more information.
7. Slide the HDD cage back to the case and fasten the two thumbscrews.
8. Connect 4-pin molex or SATA power connectors on the power supply to the power connectors on each of the devices.

5.25" Device Installation

There are four external 5.25" drive bays (one with 5.25" to 3.5" Adapter).

1. Remove the left side panel of the case.
2. Remove the plastic cover for the drive bay you want to use.
3. Slide the drive into the bay from the front of the case.
4. Fasten the drive using the screws provided in the tool bag. **Note**: you need only to fasten the drive through the open side of the drive bay.
5. Mount the other devices accordingly.
6. Connect a large 4-pin connector from the power supply to the male 4-pin connector on each of the devices.
7. Replace the left side panel of the case.

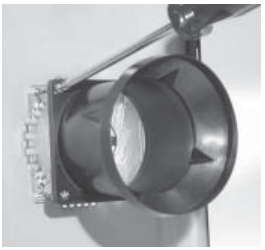
Chassis Air Guide

The new case includes a chassis air guide, to provide cooling air directly to the CPU. The air guide consists of three parts: an upper duct, flange, and lower duct. If you prefer, you can adjust the distance between the lower duct and the CPU, for maximum cooling efficiency.

You may also install a 80mm intake fan between the air guide and the case's side panel to further improve the system's cooling airflow. To install the optional fan:

1. Remove Chassis Air Guide from the side panel.
2. Install the optional 80mm fan first by locking it to the side panel as shown in Picture 3.
3. Using the fan screws, lock the flange of the air guide to the fan as shown in Picture 4.
4. Connect a large 4-pin white connector from the power supply to the male 4-pin connector on the fan.

Picture 3


Picture 4

Cooling System

The Rear Exhaust TriCool™ fan:

The NSK 6580 comes with one 120mm TriCool™ fan preinstalled. This fan has a three-speed switch that lets you choose between quiet, performance, or maximum cooling. (See specifications below.) The fan is installed so that the air is blowing out of the case. Connect a large 4-pin connector from the power supply to the male 4-pin connector on the fan. **Note**: The default setting of the fan is Low. We recommend this speed for maximum quiet computing.

Note: The minimum voltage to start the fan is 5V. We recommend that our users to set the fan speed to High if you choose to connect the fan to a fan control device or to the Fan-Only connector found on some of Antec's power supplies. A fan-control device regulates the fan speed by varying the voltage to it. The voltage may start as low as 4.5V to 5V. Connecting a TriCool™ set on Medium or Low to a fan-control device may result in the fan not being able to start. The already lowered voltage from the fan control device will be further reduced by the TriCool ™ circuitry below 5V.

Specifications:

Size:	120 x 120 x 25.4 mm
Rated Voltage:	DC 12V
Operating Voltage:	10.2V ~ 13.8V

Speed	Input Current	Air Flow	Static Pressure	Acoustical Noise	Input Power
High 2000 RPM	0.24A (Max.)	2.24 m³ / min (79 CFM)	2.54 mm-H2O (0.10 inch-H2O)	30 dBA	2.9 W
Medium 1600 RPM	0.2A	1.59 m³ / min (56 CFM)	1.53 mm-H2O (0.06 inch-H2O)	28 dBA	2.4 W
Low 1200 RPM	0.13A	1.1 m³ / min (39 CFM)	0.92 mm-H2O (0.04 inch-H2O)	25 dBA	1.6 W

The Front 92 mm Fans

This case comes with two optional 92mm fan mounts in the front of the HDD cage. The front fan should be installed so that the air is blowing into the case from the front. We recommend using Antec TriCool™ 92 mm fans and set the speed to LOW.

1. Remove the HDD cage from the case. **Note**: there is no need to remove the front bezel in order to install the fan.
2. Find four special fan screws inside the tool bag and mount the fan to the front panel from inside of the case.
3. Replace the HDD cage.

Learn more about 80 PLUS®:

80 PLUS® is an innovative, electric utility-funded incentive program to integrate more energy-efficient power supplies into desktop computers and servers.
The 80 PLUS performance specifications require power supplies in computers and servers to be 80% or greater energy efficient. This makes an 80 PLUS certified power supply at least 33% more efficient than current power supplies.
80 PLUS certified power supplies:

- Achieve energy savings, up to $70 over the life of a desktop computer
- Reduce a room's cooling load, increasing comfort and saving up to 30%
- Increase computer system reliability and save on maintenance costs by as much as 40%
- Minimize the need for noisy fans, creating a quieter environment
- Save on construction — saves hundreds of dollars in electrical system upgrades

- Allow more computers on the same branch circuit
- Save the environment — prevent pollution by reducing energy consumption

Run Cool, Run Reliably, Run with 80 PLUS® Energy Efficient®

More than 80% efficient at 20%, 50% & 100% load

www.80PLUS.org

System Integrators / VAR's for more information on 80 PLUS® financial and marketing advantages in North America go to **www.antec.com/us/80Plus.html**

Antec, Inc.
47900 Fremont Blvd.
Fremont, CA 94538
USA
tel: 510-770-1200
fax: 510-770-1288

Antec Europe B.V.
Stuttgartstraat 12
3047 AS Rotterdam
The Netherlands
tel: +31 (0) 10 462-2060
fax: +31 (0) 10 437-1752

Customer Support:
US & Canada
1-800-22ANTEC
customersupport@antec.com

Europe
+31 (0) 10 462-2060
europe.techsupport@antec.com

www.antec.com

© Copyright 2007 Antec, Inc. All rights reserved.
All trademarks are the property of their respective owners.
Reproduction in whole or in part without written permission is prohibited.
Printed in China.